AMENDMENTS TO THE CLAIMS

1. (Currently Amended) ~~Use of a~~ A material ~~in an anode~~ suitable for use in a solid oxide fuel cell, wherein the material is ~~of an, optionally doped,~~ a double perovskite oxide material having the general formula I:

$(Ln_aX_b)_e(Z^1{}_cZ^2{}_d)_fO_g$ (I)

wherein Ln is selected from the group consisting of Y, La, ~~and~~ a Lanthanide series element, ~~or a~~ and any combination ~~of these~~ thereof and X also represents an element occupying the A site of a perovskite oxide and is selected from the group consisting of Sr, Ca and Ba, and Z^1 and Z^2 represent different elements occupying the B site of a perovskite oxide and are selected from the group consisting of Cr, Mn, Mg and Fe, and wherein a has a value from 0 to 1, ~~preferably, 0.7 to 1.0,~~ b has a value of from 1 to 0, ~~preferably 0.3 to 0,~~ and each of c and d has a value of from 0.25 to 0.75, provided that a + b has a value of 1, and c + d, has a value of 1, and wherein e has a value of from 0.8 to 1, wherein f has a value of from 0.8 to 1, and g has a value of from 2.5 to 3.2; said material optionally including at least one dopant.

2. (Currently Amended) ~~Use of a~~ The material ~~as claimed in~~ of claim 1 wherein Z^1 and Z^2 represent Cr and Mn, respectively.

3. (Currently Amended) ~~Use of a~~ The material ~~as claimed in~~ of claim 1 ~~or claim 2~~ wherein X represents Sr.

4. (Currently Amended) ~~Use of a~~ The material ~~as claimed in any one of claims 1 to 3~~ of claim 1 wherein said at least one dopant is ~~provided~~ a B site dopant selected from the group consisting of V, Fe, Cu, Co, Ru, Ni, Pd, Ce, Ti, Nb, Mo and Mg.

5. (Currently Amended) ~~Use of a~~ The material ~~as claimed in~~ of claim 4 wherein the B site dopant is present at a level of not more than 20%.

6. (Currently Amended) ~~Use of a~~ The material ~~as claimed in~~ of claim 5 wherein the B site dopant is present at a level of from 5 to 20%.

7. (Currently Amended) ~~Use of a~~ The material ~~as claimed in any one of claims 1 to 6~~ of claim 1 wherein in general formula I each of c and d has a value of at least 0.4.

8. (Currently Amended) ~~Use of a~~ The material ~~as claimed in any one of claims 1 to 6~~ of claim 1 wherein at least 30% of the B sites are occupied by a third element Z^3.

9. (Currently Amended) ~~Use of a~~ The material ~~as claimed in any one of claims 1 to 8~~ of claim 1 wherein, in general formula I, a has a value of from 0.7 to 0.9.

10. (Currently Amended) ~~Use of a~~ The material ~~as claimed in~~ of claim 9 wherein, in general formula I, a has a value of from 0.72 to 0.85.

11. (Currently Amended) ~~Use of a~~ The material ~~as claimed in any one of claims 1 to 10~~ of claim 1 in which ~~the~~ said double perovskite oxide material has a porosity of at least 20%.

12. (Currently Amended) ~~Use of a~~ The material ~~as claimed in~~ of claim 11, in which ~~the~~ said double perovskite oxide material has a porosity of from 40 to 50%.

13. (Original) An SOFC having an anode or functional layer of an anode comprising a material having the general formula (I) as defined hereinbefore in claim 1.

14. (Original) An anode for use in an SOFC, said anode comprising a material having the general formula (I) as defined hereinbefore in claim 1.

15. (Original) A mixed ionic/electronic conducting membrane comprising a layer of an optionally doped double perovskite oxide material having the general formula (I) as defined hereinbefore in claim 1.

16. (Original) A membrane as claimed in claim 15 wherein said layer of double perovskite material comprises a protective layer on at least one side of a mixed ionic/electronic conducting ceramic membrane.

17. (Original) A mixed ionic/electronic conducting membrane suitable for use in a syngas reactor, which membrane comprises a layer of a double perovskite material according to claim 15.

18. (Original) A syngas reactor having a mixed ionic/electronic conducting reactor membrane, which membrane comprises a layer of a double perovskite material according to claim 15.

19. (Original) A mixed ionic/electronic conducting membrane suitable for use in an oxygen separator, which membrane comprises a layer of a double perovskite material according to claim 15.

20. (Original) A method of oxidising a fuel in an SOFC, comprising the steps of:

a) providing an SOFC having an anode as claimed in claim 14; and

b) applying a voltage to said SOFC so as to oxidize said fuel.

21. (Currently Amended) A method as claimed in claim 20 wherein is used a fuel selected from the group consisting of hydrogen; a hydrocarbon fuel compound; a hydrocarbon based fuel compound; ~~and~~ a non-hydrocarbon hydride fuel compound, ~~or a said fuel after~~ and at least partial ~~reformation~~ reformations thereof.

22. (New) The material of claim 1 wherein, in general formula I, b has a value of from 0.25 to 0.75.